CLEAN VERSION OF THE ENTIRE SET OF CLAIMS

1. A method for scheduling traffic in a network, the method comprising:

dividing a hardware schedule table into N logical schedule tables, the N logical schedule tables being separated by table delimiters; and

assigning an identifier in a scheduling table, the scheduling table being one of the N logical schedule tables, the identifier corresponding to a connection in the network.

2. The method of claim 1 wherein each of the table delimiters corresponds to at least one unused entry in the hardware schedule table.

3. The method of claim 2 wherein each of the N logical schedule tables corresponds to a class of service.

4. The method of claim 1 wherein assigning comprises:

determining if a first entry requested by the network for the identifier is occupied; and

assigning the identifier to a second entry if the first entry is occupied, the second entry being available for occupancy.

5. The method of claim 4 further comprising:

assigning the identifier to the first entry if the first entry is available for occupancy.

6. The method of claim 5 further comprising:

assigning the identifier to a third entry if the second entry coincides with one of the table delimiters, the third entry being a next available entry found from a beginning of the scheduling table.

7. The method of claim 6 wherein the network is an asynchronous mode transfer (ATM) network.

8. The method of claim 7 wherein the identifier is a virtual channel identifier.

9. A computer program product comprising:

a computer usable medium having computer program code embodied therein to schedule traffic in a network, the computer program product having:

computer readable program code for dividing a hardware schedule table into N logical schedule tables, the N logical schedule tables being separated by table delimiters; and

computer readable program code for assigning an identifier in a scheduling table, the scheduling table being one of the N logical schedule tables, the identifier corresponding to a connection in the network.

10. The computer program product of claim 9 wherein each of the table delimiters corresponds to at least one unused entry in the hardware schedule.

11. The computer program product of claim 10 wherein each of the N logical schedule tables corresponds to a class of service.

12. The computer program product of claim 9 wherein the computer readable program code for assigning comprises:

computer readable program code for determining if a first entry requested by the network for the identifier is occupied; and

computer readable program code for assigning the identifier to a second entry if the first entry is occupied, the second entry being available for occupancy.

13. The computer program product of claim 12 further comprising:

computer readable program code for assigning the identifier to the first entry if the first entry is available for occupancy.

14. The computer program product of claim 12 wherein the computer readable program code for assigning further comprising:

computer readable program code for assigning the identifier to a third entry if the second entry coincides with one of the table delimiters, the third entry being a next available entry found from a beginning of the scheduling table.

15. The method of claim 14 wherein the network is an asynchronous mode transfer (ATM) network.

16. The method of claim 15 wherein the identifier is a virtual channel identifier.

17. A system comprising:

a network interface bus;

a physical interface device coupled to the network interface bus to request a connection by an identifier; and

a network processor coupled to the network interface bus having at least a hardware schedule table to schedule traffic in the network, the at least hardware schedule table being divided into N logical schedule tables separated by table delimiters, the identifier being assigned in one of the N logical schedule tables.

18. The system of claim 17 wherein each of the table delimiters corresponds to at least one unused entry in the hardware schedule table.

19. The system of claim 18 wherein each of the N logical schedule tables corresponds to a class of service.

20. The system of claim 17 wherein the identifier is assigned to a second entry if a first entry requested by the network for the identifier is occupied, the second entry being available for occupancy.

21. The system of claim 20 wherein the identifier is assigned to the first entry if the first entry is available for occupancy.

22. The system of claim 20 wherein the identifier is assigned to a third entry if the second entry coincides with one of the table delimiters, the third entry being a next available entry found from a beginning of the scheduling table.

23. The system of claim 22 wherein the network is an asynchronous mode transfer (ATM) network.

24. The system of claim 23 wherein the identifier is a virtual channel identifier.

25. A system comprising:

a processor;

a network processor coupled to the processor, the network processor having a scheduler for scheduling traffic in a network using a hardware schedule table; and

a memory coupled to the processor to store a program, the program, when executed by the processor, causing the processor to:

divide the hardware schedule table into N logical schedule tables separated by table delimiters, and

assign an identifier in a scheduling table, the scheduling table being one of the N logical schedule tables, the identifier corresponding to a connection in the network.

26. The system of claim 25 wherein each of the table delimiters corresponds to at least one unused entry in the hardware schedule table.

27. The system of claim 26 wherein the scheduler assigns the identifier to a second entry if a first entry requested by the network for the identifier is occupied, the second entry being available for occupancy.

28. The system of claim 27 wherein the program, when causing the processor to assign the identifier in the scheduling table, causing the processor to:

assign the identifier to a third entry if the second entry coincides with one of the table delimiters, the third entry being a next available entry found from a beginning of the scheduling table.

29. The system of claim 28 wherein the network is an asynchronous transfer mode (ATM) network.

30. The system of claim 29 wherein the identifier is a virtual channel identifier.

31. The system of claim 30 wherein the network processor is a segmentation and reassembly processor.